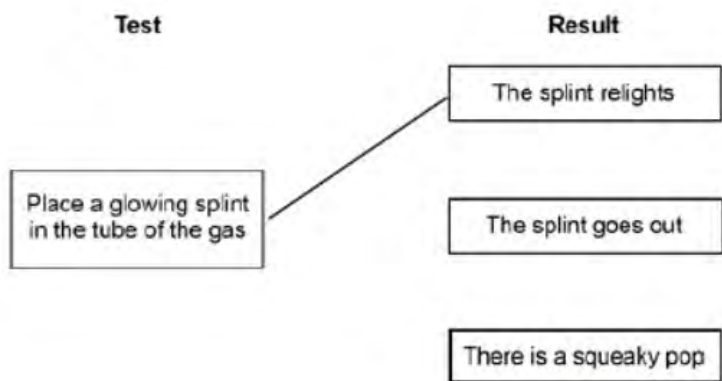


AQA Chemistry GCSE

Required Practical 3 - Electrolysis Mark Scheme

Q1. Hydrogen Iodine
Q2 a)



more than one line from test negates the mark

(b) (i) place a lighted splint at the mouth of the tube (1)

there is a squeaky pop (1)
dependent on correct test

(ii) hydrogen is less reactive than magnesium (1)
accept converse
accept magnesium is too reactive

(c)(i) anyone from: (1)

- to improve appearance or make it look nice
- to prevent corrosion
- to make it more durable
- cheaper than solid silver

(ii) solution must be silver nitrate **or** contain silver ions (1)

otherwise copper will be deposited **or** silver will not be deposited (1)

spoon must be the negative electrode / cathode (1)

because silver ions have a positive charge **or** go to negative electrode **or** are discharged at the negative electrode. (1)

(iii) because (plastic is an) insulator or does not conduct electricity
accept does not contain mobile electrons

(1)

Q3. (i) aluminium is more reactive than carbon

or

carbon is less reactive than aluminium

*must have a comparison of reactivity of carbon and aluminium
accept comparison of position in reactivity series.*

(1)

(ii) (because) aluminium ions are positive
ignore aluminium is positive

(1)

and are attracted / move / go to the negative electrode / cathode

(1)

where they gain electrons / are reduced / $Al^{3+} + 3e^{-} \rightarrow Al$

accept equation or statements involving the wrong number of electrons.

(1)

(iii) (because) the anodes

Or

(positive) electrodes are made of carbon / graphite

(1)

oxygen is produced (at anode)

(1)

which reacts with the electrodes / anodes

*Do not accept any reference to the anodes reacting with oxygen
from the air*

equation $C + O_2 \rightarrow CO_2$ gains 1 mark (M3)

(1)